

UCRL-TR-218643



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Purple Integration Project

P. Hamilton

February 3, 2006

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Purple Integration Project

ID		Notes	L1	L2	L3	MTE	Task Name	Duration	% Complete	Start	Finish	Predecessors	Resource Names	Comments
1			34(FY07Q1)	??(FY06Q3)			Purple System Ready for Limited Production	519 days?	94%	Wed 4/14/04	Mon 4/10/06			
2				??(FY06Q3)		PSE	SLURM Integration	431 days?	99%	Wed 4/14/04	Wed 12/7/05			
3	✓					PSE	LLNL Port SLURM to AIX	77 days?	100%	Fri 10/1/04	Mon 1/17/05		Jette,Grondona	
7	✓					PSE	SLURM infrastructure changes to support POE without Federation	67 days?	100%	Thu 4/29/04	Fri 7/30/04		Jette	
8	✓						Provide POE interface documentation draft, including multi-node	44 days	100%	Mon 5/3/04	Thu 7/1/04		IBM	
9	✓					PSE	Run "poe date" with SLURM - LLNL (w/o Federation)	0 days	100%	Fri 7/30/04	Fri 7/30/04		Jette	
10	✓						Provide getpeereid function in AIX (for Munge)	91 days?	100%	Tue 4/27/04	Tue 8/31/04		IBM	
11	✓					PSE	SLURM infrastructure changes to support POE with Federation	165 days	100%	Wed 6/30/04	Tue 2/15/05		King,Jette	
12						CS	Switch state monitor developed and integrated with SLURM	34 days?	90%	Tue 6/15/04	Fri 7/30/04		Fox	
13	✓						Modify POE 4.1 for SLURM	47 days?	100%	Wed 7/28/04	Thu 9/30/04		IBM	
14	✓						Provide sample process tracking kernel extension	12 days?	100%	Wed 9/15/04	Thu 9/30/04		IBM	
15	✓					PSE	SLURM changes for POE 4.1	56 days	100%	Tue 11/30/04	Tue 2/15/05	13	Jette,Gorda	
16	✓					PSE	SLURM/POE 4.1 integration testing (on EDTV) - LLNL	45 days?	100%	Wed 2/16/05	Tue 4/19/05	11,15;	Jette,Gorda	
17	✓					PSE	Develop and integrate process tracking kernel extension for SLU	61 days	100%	Tue 11/23/04	Tue 2/15/05		Gorda	
18	✓						Provide LL API documentation	209 days	100%	Wed 4/14/04	Mon 1/31/05		IBM	
19	✓						Early POE 4.2 code	0 days	100%	Wed 12/1/04	Wed 12/1/04		IBM	
20	✓					PSE	SLURM changes for POE 4.2 - LLNL	24 days?	100%	Tue 3/29/05	Fri 4/29/05	19,15	Gorda	
21	✓						Munge library to include 32 and 64-bit objects	3 days	100%	Fri 10/1/04	Tue 10/5/04		Dunlap	
22	✓						Provide completed POE interface documentation	13 days?	100%	Thu 1/13/05	Mon 1/31/05		IBM	
23	✓					PSE	SLURM / POE 4.2 / Federation testing on Newberg / OP	30 days	100%	Mon 5/2/05	Fri 6/10/05	19,20;	Jette,Gorda	
24	✓					PSE	SLURM/POE 4.2. integration testing (on Purple System) - LLNL	48 days?	100%	Mon 6/13/05	Wed 8/17/05	17,23	Jette,Gorda	
25	✓					PSE	SLURM to support checkpoint/restart	80 days	100%	Thu 8/18/05	Wed 12/7/05	24	Jette	
26	✓					PSE	SLURM to enforce hard/soft CPU/memory limits	80 days?	100%	Thu 8/18/05	Wed 12/7/05	24	Jette	
27														
28	✓						Symmetric Multi-Threading	20 days	100%	Mon 6/6/05	Fri 7/1/05		Jones	
29	✓						Workload Manager	20 days	100%	Mon 6/6/05	Fri 7/1/05	75		
30	✓						Performance	20 days	100%	Mon 6/6/05	Fri 7/1/05	75		
31														
32							Documentation	25 days	75%	Mon 2/7/05	Fri 3/11/05			
33							Web pages - ASC Platforms	25 days	75%	Mon 2/7/05	Fri 3/11/05		Hamilton	
34							Development Environment	20 days	75%	Mon 2/7/05	Fri 3/4/05		Hamilton,DEG	
35														
36				??(FY06Q3)		CS	Site Planning	363 days?	99%	Fri 10/1/04	Tue 2/21/06			
37	✓			??(FY06Q3)		CS	pDEV	26 days?	100%	Tue 11/2/04	Tue 12/7/04		Hamilton	
41	✓			??(FY06Q3)		CS	pURPURA	150 days	100%	Fri 10/1/04	Thu 4/28/05		Hamilton	
45	✓						uPurple	62 days	100%	Tue 2/22/05	Wed 5/18/05			
49	✓						Purple Hot Swap nodes	15 days	100%	Tue 4/19/05	Mon 5/9/05			
53	✓			??(FY06Q3)		CS	Purple	194 days	100%	Fri 10/1/04	Wed 6/29/05		Hamilton	
54	✓						IBM to send detailed floor plan to LLNL	0 days	100%	Fri 10/1/04	Fri 10/1/04			
55	✓						Electrical prep	26 days	100%	Wed 4/13/05	Wed 5/18/05			
56	✓						External networking	2 days	100%	Fri 6/17/05	Mon 6/20/05		LCET	
57	✓						Network config	3 days	100%	Mon 6/27/05	Wed 6/29/05		LCET,IBM	
58				??(FY06Q3)		CS	pURPURA/Purple Integration	1 day?	0%	Tue 2/21/06	Tue 2/21/06	241	Hamilton	

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Date: Tue 1/31/06

Task

Split

Progress

Milestone

Summary

Project Summary

External Tasks

External Milestone

Deadline

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Purple Integration Project

ID		Notes	L1	L2	L3	MTE	Task Name	Duration	% Complete	Start	Finish	Predecessors	Resource Names	Comments
59														
60	✓			??(FY06Q3)			pDEV Delivery and Acceptance	112 days	100%	Thu 1/6/05	Fri 6/10/05			
76														
77	✓			??(FY06Q3)			pURPURA Delivery and Acceptance	51 days?	100%	Fri 4/15/05	Fri 6/24/05			
110	✓			??(FY06Q3)			Integration of pURPURA Complete	0 days	100%	Fri 6/24/05	Fri 6/24/05	77		
111	✓			??(FY06Q3)			Early Access to pURPURA	1 day?	100%	Mon 6/27/05	Mon 6/27/05	110		
112														
113	✓						uPurple Delivery and Acceptance	34 days?	100%	Mon 5/16/05	Thu 6/30/05			
147														
148	✓			??(FY06Q3)			Purple (1280) System Scale Testing (POK)	51 days	100%	Mon 4/4/05	Mon 6/13/05			
153	✓			??(FY06Q3)			Purple (1280) Demo/Pre-Ship Test of System in POK	13 days?	100%	Mon 6/13/05	Thu 6/30/05			
156														
157	✓						Purple (1280) System Scale Testing (POK)	35 days	100%	Thu 6/30/05	Wed 8/17/05	153		
162	✓			??(FY06Q3)			Purple (1280) System Breakdown	11 days	100%	Thu 8/18/05	Thu 9/1/05		IBM	
166														
167	✓						Purple at LLNL	146 days?	100%	Thu 4/14/05	Thu 11/3/05			
168	✓						Shipping and transit	122 days?	100%	Thu 4/14/05	Fri 9/30/05			
175	✓						Physical Installation Switch and 252 nodes	45 days?	100%	Tue 5/3/05	Mon 7/4/05			
184	✓						Switch and 252 Node Bringup	25 days?	100%	Thu 6/30/05	Wed 8/3/05			
190	✓			??(FY06Q3)			Purple (252) Merge with Purple (1024)	49 days?	100%	Mon 8/29/05	Thu 11/3/05			
204														
205	✓			??(FY06Q3)			Purple (1280) Acceptance at LLNL	11 days	100%	Fri 11/4/05	Fri 11/18/05			
206	✓					SE,SS	Test runs and system debug	4 days	100%	Fri 11/4/05	Wed 11/9/05	203	oewe,Fox,Hadjimarkos,IBM	
207	✓					SE,SS	Acceptance Run (includes Full SWL)	7 days	100%	Thu 11/10/05	Fri 11/18/05	206	oewe,Fox,Hadjimarkos,IBM	
208	 	ad in the Pur		??(FY06Q3)	Yes		Initial Purple (1280) System Acceptance Complete	0 days	0%	Fri 11/18/05	Fri 11/18/05	205		
209														
210	✓						Purple (1280) GA6 Firmware Upgrade	7 days	100%	Mon 11/28/05	Tue 12/6/05			
211														
212	✓						Verify application software environmnet	10 days	100%	Wed 12/7/05	Tue 12/20/05	210		
213	✓					SE,SS	MPI	10 days	100%	Wed 12/7/05	Tue 12/20/05		Jones	
214	✓						Federation hardening	10 days	100%	Wed 12/7/05	Tue 12/20/05			
215	✓						Performance (Co-scheduler, scaling, etc)	10 days	100%	Wed 12/7/05	Tue 12/20/05			
216	✓						Tools	10 days	100%	Wed 12/7/05	Tue 12/20/05			
217	✓					SE,SS	Resource management (LCRM)	10 days	100%	Wed 12/7/05	Tue 12/20/05		Tomaschke	
218	✓						Visualization tools	10 days	100%	Wed 12/7/05	Tue 12/20/05		Springmeyer	
219	✓					SE,SS	Debugger	10 days	100%	Wed 12/7/05	Tue 12/20/05		Wolfe	
220	✓					SE,SS	Compilers	10 days	100%	Wed 12/7/05	Tue 12/20/05		Gyllenhaal	
221	✓					SE,SS	Performance analysis	10 days	100%	Wed 12/7/05	Tue 12/20/05		Chambreau	
222														
223	✓						Science Runs and Early Access Runs	20 days	100%	Wed 12/7/05	Tue 1/3/06	210		
224														
225				??(FY06Q3)			Purple Integration into LLNL (SCF) Environment	8 days	0%	Wed 1/4/06	Fri 1/13/06	223		
226							Network Configuration	1 day	0%	Wed 1/4/06	Wed 1/4/06			


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Task

Split




Progress




Milestone

Summary


Project Summary




External Tasks



External Milestone



Deadline



Project: Purple System Ready for Limited Production File: Purple_LA-FY05-v241.mpp
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Purple Integration Project


ID		Notes	L1	L2	L3	MTE	Task Name	Duration	% Complete	Start	Finish	Predecessor	Resource Names	Comments
227						CS	Customize for local LC environment	2 days	0%	Thu 1/5/06	Fri 1/6/06	226	SP Team	
228							Execute security significant software tests	3 days	0%	Mon 1/9/06	Wed 1/11/06	227		
229							Verify application software environmnet	2 days	0%	Thu 1/12/06	Fri 1/13/06	228		
230						SE,SS	MPI	2 days	0%	Thu 1/12/06	Fri 1/13/06		Jones	
231							Federation hardening	2 days	0%	Thu 1/12/06	Fri 1/13/06			
232							Performance (Co-scheduler, scaling, etc)	2 days	0%	Thu 1/12/06	Fri 1/13/06			
233							Tools	2 days	0%	Thu 1/12/06	Fri 1/13/06			
234						SE,SS	Resource management (LCRM)	2 days	0%	Thu 1/12/06	Fri 1/13/06		Tomaschke	
235							Visualization tools	2 days	0%	Thu 1/12/06	Fri 1/13/06		Springmeyer	
236						SE,SS	Debugger	2 days	0%	Thu 1/12/06	Fri 1/13/06		Wolfe	
237						SE,SS	Compilers	2 days	0%	Thu 1/12/06	Fri 1/13/06		Gyllenhaal	
238						SE,SS	Performance analysis	2 days	0%	Thu 1/12/06	Fri 1/13/06		Chambreau	
239							Cross-cell functionality	2 days	0%	Thu 1/12/06	Fri 1/13/06		SP Team	
240														
241							Priority Calculation Run	26 days	0%	Mon 1/16/06	Mon 2/20/06	225		
242														
243							uPurple upgrade to AIX 5.3	4 days	0%	Tue 1/17/06	Fri 1/20/06			
244							Install AIX 5.3 with dual boot and bring up system	3 days	0%	Tue 1/17/06	Thu 1/19/06			
245							Run 4 ASCI codes	1 day	0%	Fri 1/20/06	Fri 1/20/06	244		
246														
247				??(FY06Q3)			Integration of Purple (1280) and pURPURA (on SCF)	31 days	0%	Tue 2/21/06	Tue 4/4/06	241		
248						CS	Upgrade pURPURA	4 days	0%	Tue 2/21/06	Fri 2/24/06		LCET,IBM	
249							Install AIX 5.3	1 day	0%	Tue 2/21/06	Tue 2/21/06			
250							Install GA6 SP1 Firmware	4 days	0%	Tue 2/21/06	Fri 2/24/06			
251						CS	Switch Rack Physical work	7 days	0%	Tue 2/21/06	Wed 3/1/06		LCET,IBM	
252							Node Rack Physical work	7 days	0%	Thu 3/2/06	Fri 3/10/06	251		
253							Merge Management Infrastructure	3 days	0%	Mon 3/13/06	Wed 3/15/06	252		
254						CS	Bring up and debug merged system	2 days	0%	Thu 3/16/06	Fri 3/17/06	253	IBM,SP Team	
255							RPD and GPFS for merged system	2 days	0%	Mon 3/20/06	Tue 3/21/06	254		
256							Stabilization	3 days	0%	Wed 3/22/06	Fri 3/24/06	255		
257						CS	Run 4 ASC codes	2 days	0%	Mon 3/27/06	Tue 3/28/06	256	IBM,LLNL	
258							System Ready for Acceptance	0 days	0%	Tue 3/28/06	Tue 3/28/06	257		
259						SE,SS	Acceptance run to include user apps	5 days	0%	Wed 3/29/06	Tue 4/4/06	258	oeuwe,Fox,Hadjimarkos,IBM	
260	 	lity requirem		??(FY06Q3)	Yes		Full Purple System (1536 nodes) Acceptance Complete	0 days	0%	Tue 4/4/06	Tue 4/4/06	247		
261														
262							Verify application software environmnet	2 days	0%	Wed 4/5/06	Thu 4/6/06	260		
263						SE,SS	MPI	2 days	0%	Wed 4/5/06	Thu 4/6/06		Jones	
264							Federation hardening	2 days	0%	Wed 4/5/06	Thu 4/6/06			
265							Performance (Co-scheduler, scaling, etc)	2 days	0%	Wed 4/5/06	Thu 4/6/06			
266							Tools	2 days	0%	Wed 4/5/06	Thu 4/6/06			
267						SE,SS	Resource management (LCRM)	2 days	0%	Wed 4/5/06	Thu 4/6/06		Tomaschke	
268							Visualization tools	2 days	0%	Wed 4/5/06	Thu 4/6/06		Springmeyer	
269						SE,SS	Debugger	2 days	0%	Wed 4/5/06	Thu 4/6/06		Wolfe	

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Task

Split




Progress




Milestone

Summary

Project Summary




External Tasks



External Milestone

Deadline





Project: Purple System Ready for Limited Production

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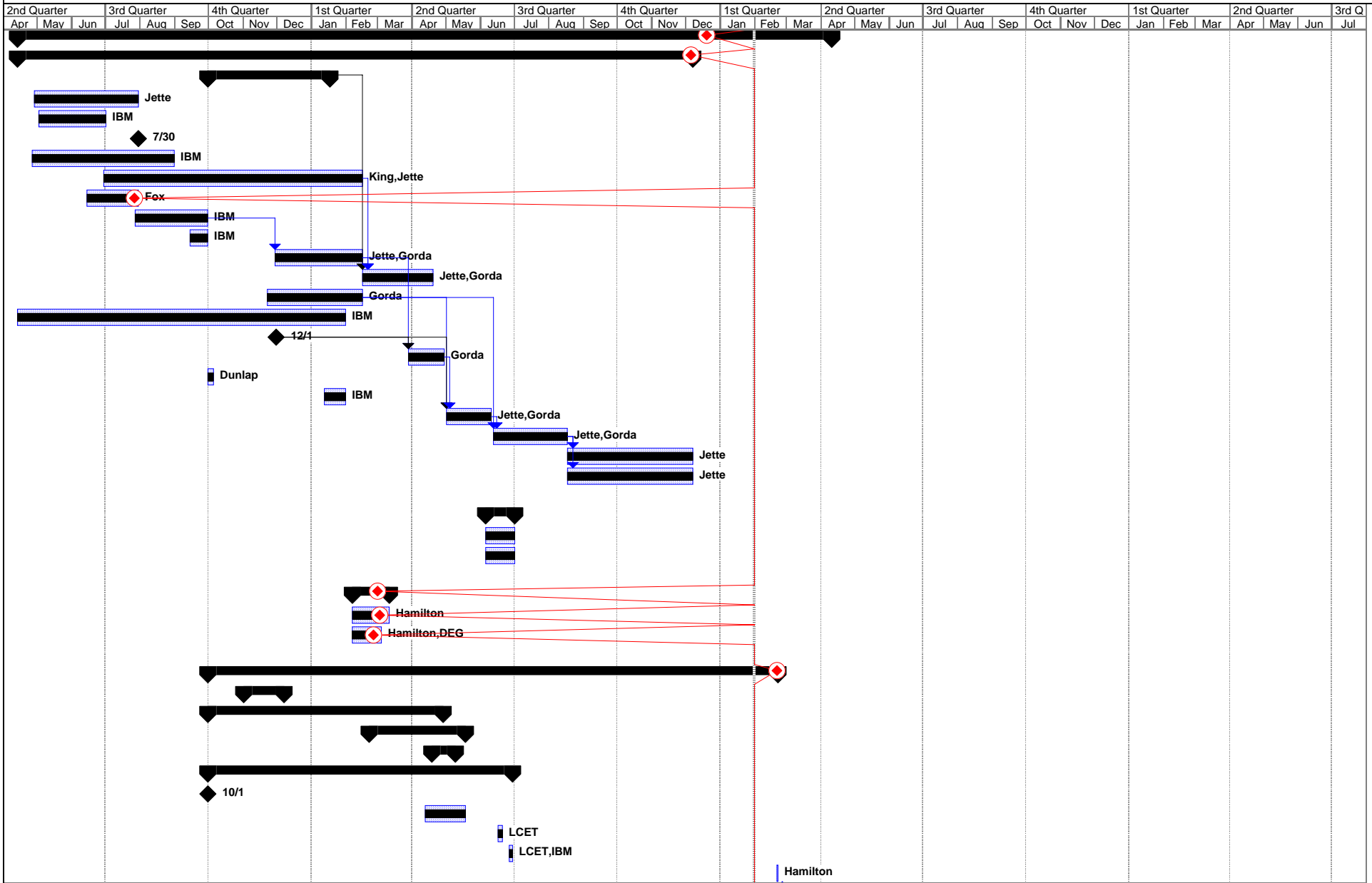
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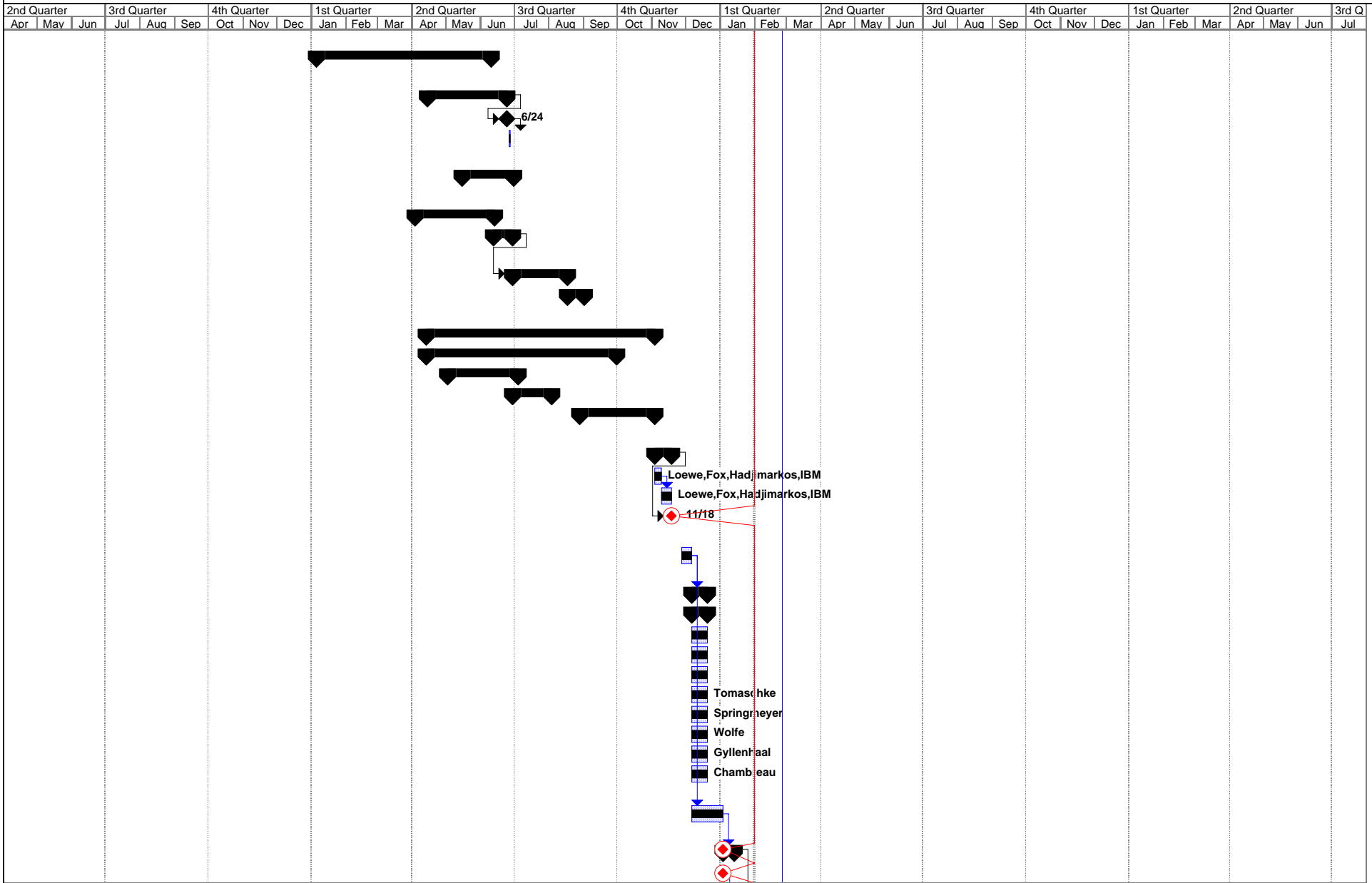
Purple Integration Project

ID		Notes	L1	L2	L3	MTE	Task Name	Duration	% Complete	Start	Finish	Predecessors	Resource Names	Comments
270						SE,SS	Compilers	2 days	0%	Wed 4/5/06	Thu 4/6/06		Gyllenhaal	
271						SE,SS	Performance analysis	2 days	0%	Wed 4/5/06	Thu 4/6/06		Chambreau	
272							Cross-cell functionality	2 days	0%	Wed 4/5/06	Thu 4/6/06		SP Team	
273						CS	File transfers to archive	2 days	0%	Wed 4/5/06	Thu 4/6/06		DSG,SP Team	
274														
275		the archive.		??(FY06Q3)	Yes		Integration of Purple Complete	0 days	0%	Thu 4/6/06	Thu 4/6/06	262		
276							Early Access to Purple	1 day?	0%	Fri 4/7/06	Fri 4/7/06	275		
277														
278			34(FY07Q1)	??(FY06Q3)			Purple System Ready for Limited Production Complete	1 day?	0%	Mon 4/10/06	Mon 4/10/06	276		

Purple Integration Project



Purple Integration Project



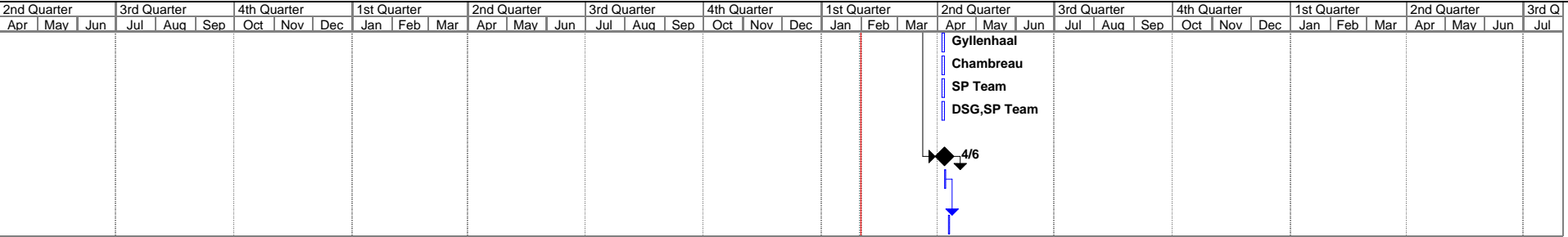
Purple Integration Project

2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Q		
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
<p>SP Team</p> <p>Tomaschke</p> <p>Springmeyer</p> <p>Wolfe</p> <p>Gyllenhaal</p> <p>Chabreau</p> <p>SP Team</p> <p>LCET, IBM</p> <p>IBM, SP Team</p> <p>IBM, LLNL</p> <p>3/28</p> <p>Loewe, Fox, Hadjimarkos, IBM</p> <p>4/4</p> <p>Tomaschke</p> <p>Springmeyer</p> <p>Wolfe</p>																													

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Purple Integration Project



Purple Integration Project

208 Initial Purple (1280) System Acceptance Complete

The initial Purple system is defined as the nodes delivered in August 2005 (less what was delivered earlier and designated as the pURPURA system). This milestone is complete when the Purple system demonstrates the performance metric as defined in the Pur

260 Full Purple System (1536 nodes) Acceptance Complete

The full Purple system is defined as all nodes delivered to date reconfigured into one system (pURPURA system and initial Purple system combined). This milestone is complete when the full Purple system is stabilized and satisfies the reliability requirem

275 Integration of Purple Complete

This milestone is complete when the LLNL application software environment has been tested and verified including the areas of resource management, visualization, debugging, compiling, performance analysis, MPI, and data transfers to the archive.